



University of Kerala

Discipline	BOTANY				
Course Code	UK3DSEBOT202				
Course Title	FORESTRY				
Type of Course	DSE				
Semester	III				
Academic Level	200-299				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours/Week
	04	04 Hours	-	-	04 Hours
Pre-requisites	No Pre-requisites				
Course Summary	The course provides an overview of forestry, such as forest ecology, management practices, conservation, sustainable development and agroforestry. The students will gain an understanding of the principles and practices of forestry and their role in environmental conservation and resource management				

Detailed Syllabus:

Module	Unit	Content	Hrs
I	Introduction		15
	1	General introduction, definition and scope of forestry	
	2	Types of Forest- Natural and Manmade	
	3	Classification of forest- Tropical, temperate, evergreen semi-evergreen, deciduous. Learning Activity:- 1. Field trips should be organized to different forest types 2. Hands-on training on navigation and map reading 3. Identification of forest Trees by Seeds / Bark (10 trees) 4. Examination of Microscopic Features of Wood 5. Analysis of Forest Vegetation- Density, Frequency and Abundance 6. Preparation of seedlings of forest tree species and planting.	
	4	Deforestation, reforestation and Afforestation	
II	Forest Management		12
	5	Silviculture- concept and scope of study - natural and artificial regeneration of forests- Monoculture, multipurpose.	
	6	Clear felling, uniform shelter, wood selection, coppice and conservation systems.	
	7	Silviculture practices (Brief outline only) of some of the economically important species in India such as, <i>Tectona grandis</i> , <i>Eucalyptus indica</i> , <i>Swietenia mahagoni</i> , <i>Dalbergia sisso</i> , <i>Santalum album</i> .	

III	Forestry practices		08
	8	Social and agroforestry. Selection of species and role of multipurpose trees. Food, fodder and energy.	
	9	Farm forestry, urban forestry, joint forest management - concepts, objectives and programmes, Avenue plantation.	
	10	Sacred groves- conservation and importance	
IV	Forest Economics and Valuation		10
	11	Forest resources and utilization. Forest products- timber, pulp wood, secondary timbers. Non timber forest products (NTFPs)-Gums, resins, fibers, oil seeds, nuts, rubber, canes and bamboos, medicinal plants, charcoal. Lac collection and marketing	
	12	Ecosystem services provided by forests	
V	Forest Policy and Governance		15
	13	Forest laws- necessity, General principles, Indian forest act	
	14	Community-based forestry and participatory approaches	
	15	Forest governance: stakeholders, institutions, and decision-making processes	

Suggested Reading

1. A Hand book of Kerala Timbers- KFRI, Trichur.
2. B.S. Chundawat and S.K.Gautham. (1996). Text book of Agroforestry. Oxford and IBH Publishing House , NewDelhi
3. Parthiban K T (2016) Forestry, Competition Tutor publishers
4. Praveen Dhar T .(2018). Introduction to Forestry Narendra Publishing House, New Delhi
5. Sagreiya, K.P. (1994). Forests and Forestry (Revised by S.S. Negi). National book trust. NewDelhi.

References

1. Singh M.P. and Vinita Vishwakarma.(1997) .Forest environment and Biodiversity. Daya publishing house, NewDelhi.
2. Tiwari K.M. (1983). Social forestry in India.
3. Tribhawan Mehta, (1981). A handbook of forest utilization. Periodical Expert Book Agency, NewDelhi

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1. <https://www.esa.org/seeds/toolkits/forests/introduction-to-forestry/>
2. <https://www.britannica.com/science/forestry>
3. https://agri-bsc.kkwagh.edu.in/uploads/department_course/FRST-121_Forerstry_notes.pdf

Course Outcomes

No.	Upon completion of the course the graduate will be able to	Cognitive Level	PSO addressed
CO-1	Understand the structure, composition, and function of forest ecosystems, including the interactions between biotic and abiotic components.	R, U	PSO-1,2
CO-2	Explain the principles and practices of forest management, including silviculture, timber harvesting, and forest regeneration.	An, U	PSO-1,2
CO-3	Develop skills in conducting forest inventories and assessing forest resources.	Ap, C	PSO-1,2
CO-4	Gain an understanding of forest economics, including the economic value of forests, sustainable forest management practices, and the role of forests in supporting local economies and livelihoods	E, C	PSO-1,2
CO-5	Students understand the various Forest Policy and Governance	U,R	PSO-1,2

R-Remember, U-Understand, Ap-Apply, An-Analyse, E-Evaluate, C-Create

Name of the Course: Forestry

Credits: 4:0:0 (Lecture:TutorialPractical)

CO No.	CO	PO/PSO	Cognitive Level	Knowledge Category	Lecture (L)/Tutorial (T)	Practical (P)
1	1	1,2	R, U	F, C	L, T	
2	2	1,2	An, U	P	L, T	
3	3	1,2	Ap, C	E, C	L, T	P
4	4	1,2	E, C	F, C	L, T	P
5	5	1,2	U,R	F	L, T	

F-Factual, C- Conceptual, P-Procedural, M-Metacognitive

Assessment Rubrics:

- Quiz / Assignment/ Quiz/ Discussion / Seminar
- Midterm Exam
- Programming Assignments
- Final Exam

Mapping of COs to Assessment Rubrics :

	Internal Exam	Assignment	Project Evaluation	End Semester Examinations
CO 1	✓			✓
CO 2	✓			✓
CO 3	✓			✓
CO 4		✓		✓
CO 5		✓		✓